

BSC. PART - II EXAMINATION - 2017

CHEMISTRY HONOURS ORGANIC

1. Select the correct answer among the four given options:
- (a) Isopropyl alcohol on oxidation forms :
(i) Acetone (ii) Ethers (iii) Acetaldehyde (iv) None of these
- (b) Which has no alpha hydrogen ?
(i) Formaldehyde (ii) Acetaldehyde (iii) Acetone (iv) All of these
- (c) Acetaldehyde on reaction with Hydroxyl amine gives :
(i) Acetal amine (ii) Acetal oxide (iii) Acetal oxime (iv) Amino acetal
- (d) The aqueous solution of Benzene diazonium chloride on steam distillation gives:
(i) Toluene (ii) Phenol (iii) Amino acid (iv) Urotropene
- (e) Decarboxylation of Salicylic acid with sodalime gives :
(i) Phenol (ii) Cresol (iii) Xylene (iv) Toluene
- (f) Middle carbon atom in $H_2C = C = CH_2$ is in hybrid state ?
(i) sp (ii) sp^2 (iii) sp^3 (iv) sd^3
- (g) How many NMR signals do you expect from 3-hexyne ?
(i) 10 (ii) 20 (iii) 30 (iv) None of these
- (h) Phenol is :
(i) Acidic (ii) Basic (iii) Neutral (iv) Amphoteric
- (i) TNT is an :
(i) Explosive (ii) Antacid (iii) Sweetening agent (iv) Analgesic
- (j) KNO_3 is present in :
(i) Tollen's reagent (ii) Bayer's reagent (iii) Both (i) and (ii) (iv) None of these
2. How will you bring out the following conversions ?
(a) Benzene to o-nitrophenol (b) Phenol to Picric acid (c) Toluene to TNB
(d) Phenol to m-nitrophenol (e) Benzene to acetophenone
3. (a) Prepare Adipic acid and Barbituric acid from Diethyl malonate.
(b) Mention the conversion of EAA into (i) Acetone (ii) Acetyl acetone (iii) Methyl acetic acid.
4. What is diazotization ? How benzene diazonium chloride is prepared in the laboratory ? Starting from Benzene diazonium chloride how will you prepare (i) Phenol (ii) Benzamide.
5. Describe the action of heat on (i) Lactic acid (ii) Citric acid (iii) Tartaric acid (iv) Urea.
6. Write formula of Monomer of the Polymers (i) Teflon (ii) PVC (iii) Orlon (iv) Nylon-6,6. How will you synthesize. (any two of the above) ?
7. Describe any two of the following name reactions with mechanism :
(i) Sandmeyer's reaction (ii) Gattermann's synthesis (iii) Kolbe's reaction
8. Discuss the classification of Carbohydrate ? What happens when Glucose is treated with (i) Bromine water (ii) P and III (iii) Conc. Nitric acid.
9. Write short notes on any two of the following :
(i) Fenton's reagent (ii) Keto-Enol Tautomerism (iii) Mutarotation